

APPENDIX B

PENDING CLAIMS

- 1 1. (Twice Amended) A method of increasing the efficiency of transfection
2 of cycling cells sensitive to high energy electromagnetic radiation, comprising:
3 synchronizing at least 30% of said cells at a first stage of the cell cycle by
4 contacting said cells with high energy electromagnetic radiation, and
5 transfecting said cells at a second stage of the cell cycle within about one cell
6 cycle of said first stage with a nucleic acid that encodes a desired gene product.

- 1 2. A method of claim 1 wherein said high energy electromagnetic radiation
2 synchronizes cells at a stage of the cell cycle when the nuclear membrane is substantially
3 degraded.

- 1 3. A method of claim 1 wherein said high energy electromagnetic radiation
2 synchronizes cells at late S phase.

- 1 4. A method of claim 1 wherein said high energy electromagnetic radiation
2 synchronizes cells at the G₂/M phase boundary.

- 1 5. A method of claim 1 wherein said high energy electromagnetic radiation
2 synchronizes cells at a stage other than M phase, and the nucleic acid accumulates in cells that
3 have cycled to the G₂/M phase boundary.

- 1 6. A method of claim 1 wherein said first stage and said second stage are the
2 same.

- 1 7. (Amended) A method of claim 1 wherein said gene product is foreign to
2 said cells.

- 1 8. (Amended) A method of claim 1 wherein said gene product is toxic to
2 said cells.

1 9. (Amended) A method of claim 8 wherein said gene product induces
2 apoptosis.

1 10. (Amended) A method of claim 1 wherein said nucleic acid is fully
2 encapsulated in a lipid-nucleic acid particle.

1 11. The method of claim 1 wherein said high energy electromagnetic
2 radiation is a member selected from the group consisting of Gamma rays, X-rays, and ultraviolet
3 rays.

1 12. The method of claim 11 wherein said high energy electromagnetic
2 radiation is X-rays.

1 46. The method of claim 1, wherein said cells are present within a mammal.